

## SIGNAL RECEIVING SYSTEM

**[0001]** This application is a continuation-in-part application of Patent Application No. <sup>10/756,216, NOW U.S. PATENT No. 6,933,907</sup> (~~Not Known~~) (Attorney Docket No. D3301-00130) filed on January 13, 2004 under the title "VARIABLE DIRECTIVITY ANTENNA AND VARIABLE DIRECTIVITY ANTENNA SYSTEM USING SUCH ANTENNAS".

**[0002]** This invention relates to a signal receiving system using a variable directivity antenna.

### BACKGROUND OF THE INVENTION

**[0003]** A directional antenna may be used to receive a radio wave from a particular direction better than waves from other directions. A Yagi antenna is well-known as a directional antenna. A variable directivity antenna is used to selectively receive a desired one of radio waves from various directions. An example of variable directivity antenna is disclosed in Japanese Utility Model Publication No. SHO 63-38574 Y2 published on October 12, 1988.

**[0004]** The variable directivity antenna disclosed in this Japanese UM publication includes first and second antennas which lie to orthogonally intersect with each other in the same horizontal plane. Dipole antennas or folded dipole antennas are used as the first and second antennas. A signal received by the first antenna is applied through a first variable attenuator to a combiner, and a signal received by the second antenna is applied through a second variable attenuator to the combiner. The directivity of the variable directivity antenna can be varied by adjusting the amounts of attenuation provided by the first and second variable attenuators.

**[0005]** The above-described variable directivity antenna has directivity that can rotate, and, therefore, it can receive only a radio wave from a desired direction selected from radio waves from various directions. However, the amounts of attenuation provided by the first and second variable attenuators of the variable directivity antenna disclosed in Japanese Utility Model Publication No. SHO 63-38574 Y2 are adjusted by varying the values of DC currents